



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

May 3, 2016

Rein Landman
Linde Dairy
47988 207th Street
White, SD 57276-6034

Re: Linde Dairy Manure Management System
Plans and Specifications Review – 2016 Expansion

Dear Mr. Landman:

The Department of Environment and Natural Resources (DENR) has received four copies of plans and specifications for the proposed expansion of your existing dairy feeding operation. Your existing operation currently has coverage under the General Water Pollution Control Permit for Concentrated Animal Feeding Operations (the general permit) for a maximum of 1,430 dairy cattle (1,400 mature dairy cows and 30 dairy heifers/calves) (permit number SDG-0100054). The manure management system is located in the South ½ of the Southeast ¼ of Section 29, Township 111 North, Range 48 West in Brookings County, South Dakota.

The proposed expansion is for an additional 1,950 dairy cattle (1,920 mature dairy cows and 30 dairy heifers/calves), for a proposed maximum of 3,380 dairy cattle (3,320 mature dairy cows and 60 dairy heifers/calves). The proposed manure management system will also be located in the South ½ of the Southeast ¼ of Section 29, Township 111 North, Range 48 West in Brookings County, South Dakota.

The existing permitted manure management system consists of three freestall barns with a flush system in each, a milking parlor, a feed storage area, a covered commodity shed, a manure solids separator, a solid manure storage area, piping, diversion dikes or channels, two holding ponds, and 2.84 acres of drainage area. The holding ponds meet the requirements of the general permit and are designed with at least 365 days of liquid storage capacity.

The proposed manure management system for the expansion will be located adjacent to the existing facility and will consist of one freestall barn with a vacuum wagon collection system, an attached building with a milking parlor, holding area, two concrete collection pits, milk trailer bay, equipment room, and office, an attached manure solids separator building with a concrete pit, a concrete manure solids storage area with 365 days of solids storage capacity, and one holding pond that will have 365 days of liquid storage capacity for the proposed expansion. The proposed manure management system will operate independent of the existing manure management system.

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We have reviewed and hereby conditionally approve the plans and specifications for your project. This approval expires on May 3, 2018, unless construction of the proposed manure management system has been started by that date. Requirements that you must implement are listed on the attached pages. Failure to implement the requirements on the following pages prior to operation of the proposed manure management system will invalidate this approval.

Two copies of the approved plans and specifications are being retained for our files. If significant deviations from the approved plans and specifications are required, those changes and change orders must be approved by the department prior to construction. As-built plans will be required if there are any deviations from the approved plans and specifications during construction.

Upon completion of construction of the proposed manure management system, the enclosed Notice of Completion must be returned to the department. **Please be aware that you cannot increase your animal numbers above the currently permitted maximum of 1,430 dairy cattle, confine cattle in the new barn, or use new manure storage structures to store manure, until the department conducts a construction inspection and issues you an updated Certificate of Compliance and permit coverage for your new manure management system components.** Continued compliance is dependent upon you performing proper operation and maintenance activities. You will be liable for any noncompliance with applicable South Dakota environmental laws or regulations.

Our review is primarily to assure that the system meets the requirements of the general permit and does not cover items such as, quality of material, structural soundness, electrical, and mechanical design features. Approval of the plans and specifications does not in any way release the producer from the responsibility of ensuring that the project will be an operable facility when construction is completed.

If you have any questions regarding the content of this letter, please feel free to contact Keith Miller, Feedlot Permit Program, at (605) 882-5111. Thank you for your cooperation.

Sincerely,



Kent R. Woodmansey, PE, Engineering Manager
Feedlot Permit Program
Phone: (605) 773-3351

Enclosures: Construction Schedule postcard
Notice of Completion form

Cc: Brian Friedrichsen, PE, Dakota Environmental, Inc., P.O. Box 636, Huron, SD 57350
Matt Hicks, DENR Ground Water Quality Program
Kevin Banken, Centrol Crop Consulting, 333 Marian Ave, Brookings, SD 57006
Brookings County Commissioners

REQUIREMENTS

The following requirements must be implemented before we will issue an updated Certificate of Compliance and coverage under the general permit for the new manure management system components. Failure to implement these requirements will invalidate this approval.

Plans and Specifications

The plans and specifications review is to determine whether seepage, storage, and other design requirements will be met.

1. Holding Pond Staff Gauge Typical Detail

The typical detail drawing for the holding pond staff gauge, on plan sheet 6, shows an 18-inch clay liner shall be maintained around and beneath the steel "T" post. Other plans and specifications included in the submittal indicate the proposed holding pond is to be constructed with a 24-inch compacted clay liner. **Please submit either a revised or an as-built typical detail drawing showing the 24-inch clay liner will be or was maintained around and beneath the staff gauge post.**

2. Pipe Inlet to Pond and Chute/Splash Pad Typical Detail

The typical detail drawing for the pipe inlet to pond and chute/splash pad side view, on plan sheet 6, shows an 18-inch clay liner shall be maintained beneath the chute/splash pad. Other plans and specifications included in the submittal indicate the proposed holding pond is to be constructed with a 24-inch compacted clay liner. **Please submit either a revised or an as-built typical detail drawing showing the 24-inch clay liner will be or was maintained beneath the chute/splash pad.**

3. Office Septic System

Your submitted plans do not include any information regarding a septic system for the proposed office area. Plans and specifications for any new on-site system, except those that are conventional onsite systems that treat domestic wastewater, must be submitted to the department for review and approval prior to construction. A certified installer must install the on-site septic system. For more information contact Scott Hipple at (605) 773-3351. **If an on-site septic system is installed, please have your engineer submit as-built drawings showing the general location of the septic system.**

General Permit

You will be required to operate your feeding operation and manure management system in accordance with the requirements in the general permit.

1. Ground Water Monitoring

Based on the system design, soil boring logs, other published reports and information, and the site's existing groundwater monitoring requirements, ground water monitoring will also be required for the new holding pond. Since Brookings County has adopted wellhead

REQUIREMENTS CONTINUED

protection ordinances, a Ground Water Discharge Permit will not be required. The proposed holding pond may be located on the boundary of Zone B of the Brookings County Aquifer Protection Overlay Zones.

At least three additional downgradient wells must be installed. A South Dakota licensed well driller must install the monitoring wells. The following parameters must be monitored:

- | | |
|-------------------------|-------------------------------------|
| 1. Chlorides (mg/L) | 4. Sulfates (mg/L) |
| 2. Ammonia as N (mg/L) | 5. Total Dissolved Solids (mg/L) |
| 3. Nitrates as N (mg/L) | 6. Water Levels (Nearest 0.01-foot) |

All wells must be monitored throughout the life of the facility. **Quarterly monitoring will be required for at least one year for the above listed parameters in the new monitoring wells.** Sampling for the existing monitoring wells is to continue on a semi-annual basis until further notice. Depending upon the results of the first year of monitoring, the monitoring schedule or parameters sampled may be altered. If groundwater is affected, DENR may require more frequent monitoring, ground water remediation, or a Ground Water Discharge Permit.

Prior to commencement of construction, at least one additional round of sampling must be collected from the five existing monitoring wells currently located around the existing two holding pond system.

Information on the construction of the three new monitoring wells shall be submitted within one month after the construction of the monitoring wells is complete, including a map locating the wells in relation to the facility, and the well driller's boring logs showing the construction details of the wells including the elevation at the top of each well casing in relation to other site elevations. Also, you must submit a copy of the monitoring well sampling results to the department as the periodic sampling is conducted. The new wells must be installed and sampled prior to operation of the new manure management system.

Should the design or operation of the facility change appreciably, new hydrogeological information become available, or any contamination problems be reported, DENR reserves the right to reassess the need for ground water monitoring, a Ground Water Discharge Permit, or possible remedial action. **For additional information regarding ground water monitoring requirements, please contact Matt Hicks, Ground Water Quality Program, at (605) 773-3296.**

Since existing monitoring wells #3 and #4 will no longer be on the exterior perimeter of the holding pond system, monitoring wells #3 and #4 may be abandoned. If the wells are to be abandoned you will need to ensure that they are plugged and abandoned in accordance with ARSD 74:02:04. The well should be plugged by a South Dakota licensed well driller prior to the commencement of construction activities for the proposed holding pond. Additional information concerning the plugging of wells may be obtained by calling Ken Buhler at (605) 773-3352.

REQUIREMENTS CONTINUED

2. Notification

Construction Schedule – You or your engineer must notify the department of the proposed construction schedule for your project to allow our personnel the opportunity for construction inspections. Please fill out the enclosed postcard and return it to us prior to beginning construction of any new manure management system components. If any of the dates change from the ones submitted on the postcard, please notify Keith Miller at (605) 882-5111.

Other Government – You are responsible for contacting your local planning and zoning office to determine if there are any local ordinances or requirements with which you need to comply. If a stream, lake, or wetland will be dredged or filled during the construction of the feeding operation, then you need to contact the United States Corps of Engineers at (605) 224-8531 prior to construction of the manure management system.

Notice of Completion – The Notice of Completion form must be completed by your engineer and returned to the department when construction of the manure management system is complete. The department cannot issue you a Certificate of Compliance and coverage under the general permit until we receive a Notice of Completion. **You are not allowed to populate the buildings or use the manure management system until you are issued a Certificate of Compliance and coverage under the general permit.**

3. Phosphorus-Based Nutrient Management Plan (NMP)

A. Revised Initial NMP Submitted

The submittal for the proposed expansion included a revised initial NMP (form SD-CPA-7) updated to show the new maximum of 3,380 dairy cattle. No new fields were added to the currently approved NMP. The revised NMP shows that after the proposed expansion you will continue to have adequate acres available for manure application to meet general permit requirements.

B. Wells and Setbacks

The facility containment system and manure application sites must be located at least 150 feet from a private well owned by you, 250 feet from a private well not owned by you, and 1,000 feet from any public supply well or other public drinking water source. These setback distances from identified wells cannot be included as part of the acres available for land application of manure.

C. NMP Field Addition Requirements

To add fields to your approved NMP, you must submit the required information for each additional field to the department for our review and approval. Required documentation includes the calculation of a RUSLE value for each field to be added. You may visit our website at <http://denr.sd.gov/des/fp/fieldadditions.aspx> or contact us at (605) 773-3351 for instructions on adding fields to your NMP. Information on adding fields to your NMP

REQUIREMENTS CONTINUED

may also be obtained from your local NRCS office. **You may not apply manure to any fields not included in your approved phosphorus-based NMP.**

4. Other Permits That May or Will Be Required

Storm Water Permit - Since the construction of your project disturbs more than one acre in total land area, a general storm water construction permit is required. This permit must be obtained 15 days prior to starting construction. As part of the requirement for obtaining coverage under this permit you must develop and implement a pollution prevention plan. Information concerning this permit and the pollution prevention plan can be obtained by calling William Marcouiller at 1-800-737-8676. **A copy of this plan must be kept on site during construction for review by DENR inspectors.**

Water Rights Permit – Depending on your water usage, you may need to obtain a water rights permit. You must submit information regarding the source(s) of all water to be used in the operation of your animal feeding operation. You must include the average and maximum daily volumes of water to be used from each source. The water volumes must include all water usage such as water for consumption, washing, misters, milk cooling, overflow watering systems, cooling, dust control, etc. Information concerning this permit can be obtained by calling Eric Gronlund at (605) 773-3352. Please contact Eric so he can assist you in determining if you need to obtain a water rights permit.

Permit to Occupy Right of Way – If manure application will involve placing hoses or other equipment in a state highway right of way (for example, in a road ditch or through a culvert), you must first obtain a Permit to Occupy Right of Way. Application for this permit may be made through the local South Dakota Department of Transportation area office. Contact your local SD DOT area office for more information on this permit. In addition, please contact your county highway superintendent to determine if your county has similar requirements.

Emission Reporting – Depending on the estimated quantity of emissions of hazardous substance from your facility, you may be required to submit a continuous release report to the State Emergency Response Commission and Local Emergency Planning Commission. Information regarding emission reporting and how to determine if you need to submit a report is available by contacting Trish Kindt with DENR, at 1-800-433-2288, or on our website at http://denr.sd.gov/des/gw/SARATitleIII/Emissions_from_Animal_Waste.aspx.

Emergency Power Generator – The department has observed that emergency power generators have been installed at similar sized operations. If an emergency power generator will be installed at your operation it may require that you obtain an air quality permit. Please contact Earl Berg with the department's Air Quality Program, at (605) 773-3151, to determine whether an air quality permit is required. If an air quality permit is required, you must have that permit prior to using the generator.